UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,175	06/01/2001	Robert Ghanea-Hercock	36-1527	2020

23117	7590	07/25/2006

NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER
CHANKONG, DOHM

ART UNIT	PAPER NUMBER
2152	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/700,175	GHANEA-HERCOCK ET AL.
	Examiner	Art Unit	
	Dohm Chankong	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 May 2006*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-20,29 and 31-45* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-20, 29, and 31-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1>   This action is in response to Applicant's amendment and remarks, filed 5.1.2006.

Claims 2-4, 7, 9, 11-14, 20, 29 and 36-37 are amended. Claims 38-45 are newly added. Claims 2-20, 29, and 31-45 are presented for further examination.

2>   This is a final rejection.

Response to Arguments

3>   Applicant's arguments with respect to claims 2-20, 29, and 31-45 have been considered but are moot in view of the new ground(s) of rejection necessitated by Applicant's amendment of the claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4>   Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

    a.   Claim 10 lacks proper antecedent basis. Specifically, the claim discloses transmitting a move instruction in response to said monitoring status. Claim 10 depends on claims 9 and 36. Neither of these claims disclose a monitoring status. A

monitoring status feature is claimed in claim 5 but claim 10 does not depend on claim

5. Thus, claim 10 lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5>   Claims 11, 12, 29, 36, 37 and 43 are rejected under 35 U.S.C § 102(e) as being anticipated

by Baumann et al, "Agent Groups in Mobile Agent Systems", Conference on Distributed

Applications and Interoperable Systems, 1997 ["Baumann"].

6>   As to claim 29, Baumann discloses a method of remote computing comprising:

supplying a plurality of parallel processing task programs from a first computer a

second computer [pg. 3, Fig. 1 | pg. 5, Fig. 3];

supplying a coordinating program from said first computer to said second computer

[pgs. 6-9, section 4.3 "Group Coordinator" where : the agent group migrates from computer

to computer, the agent group including a coordinating program]; and

coordinating operation of the plurality of parallel processing task programs on said

second computer through the coordinating program executed on said second computer [pgs.

6-9, section 4.3 "Group Coordinator"].

7>   As to claim 36, Baumann discloses a remote computing system comprising:

a first computer [pg. 3, Fig. 1]; and

at least one second computer coupled thereto via a communications link [pg. 3, Fig. 1];

said first computer being programmed to transmit to said at least one second

computer via said link [pgs. 2-3, Section 2 "Agent-Based Systems – Our Agent Model"]:

data defining a plurality of heterogeneous programs for performing a

computing task at said at least one second computer, said data comprising, for each

one of said plurality of heterogeneous programs, code for performing at least a part of

said task and for communicating with a coordinating program located at said second

computer, said plurality of heterogeneous programs being arranged for parallel

execution on the at least second computer [pgs 1-3, pgs 5-9 where : Baumann's group

members correspond to claimed heterogeneous programs]; and

data defining said coordinating program, said data comprising code for

communicating with and for coordinating said plurality of heterogeneous programs

on said at least one second computer and code for communicating with said first

computer [pgs 1-3, pgs 5-9 where : Baumann's group coordinator corresponds to

claimed coordinating program],

said at least one second computer thereby being programmed to receive said data and

to execute, in parallel, said coordinating program and said plurality of heterogeneous

programs [pgs 1-3, pgs 5-9].

8>   As to claims 11 and 12, Baumann discloses a coordinating program capable of removing

each of said plurality of heterogeneous programs from each of said computers and terminate

execution [pgs. 9-10, section 4.4 "Group Administrator | receiver of results"] and code fro

causing a second computer to remove and terminate the at least one heterogeneous program

in the absence of a signal [pgs 9-10, sections 4.3 and 4.4 : "...an out event is generated and

transmitted...that terminates all group members"].

9>   As to claims 37 and 43, they are rejected for at least the same reasons set forth for

claims 29 and 36. Additionally, Baumann discloses the coordinating program coordinating the

operations of the heterogeneous programs and that each of the heterogeneous programs

performs at least part of said task [pg. 2, ¶1 : "...propagate completion of a subtask" | pgs. 6-9,

Section 4.3 "Group coordinator"].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
> are such that the subject matter as a whole would have been obvious at the time the invention was made to a
> person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

10>   Claims 38, 39 and 44are rejected under 35 U.S.C § 103(a) as being unpatentable over

Baumann.

11>   As to claims 38 and 39, Baumann does not expressly disclose determining whether to

move (and moving) the coordinating program from the second computer to a third computer

which is remotely located from the first and second computers. Baumann does disclose

however that agents may move from locations to location to meet other agents and access the

locations' services [pg. 2, ¶3]. Additionally, Baumann displays a figure whereby a program

migrates from a first computer to a second computer to a third computer [pg. 3, Figure 1].

Thus, it would have been obvious to one of ordinary skill in the art to reasonably

infer that the determination functionality as claimed is implicit in Baumann's agents system.

Baumann clearly establishes that the mobile agent groups, including the group coordinator

migrates to different computers; the step whereby the group determines whether to move to

a different computer is thus implicit.

12>   As to claim 44, it is rejected for at least the same reasons set forth for claims 38 and 39.

13>   Claims 40-42 and 45 are rejected under 35 U.S.C § 103(a) as being unpatentable over

Baumann, in view of Wooldridge, "Agent-Based Computing".

14>   As to claim 40, Baumann does not disclose receiving a message from a scout agent

program being executed on a third computer.

15>   In the same field of invention, Wooldridge is directed towards an agent-based

computing system [pg. 3, ¶3]. Wooldridge discloses receiving messages from scout agent

programs being executed on a computer [pg. 18,¶2 : "...dispatch agents to collect information

on your behalf. Agents will dispatch agents]. It would have been obvious to one of ordinary

skill in the art to incorporate Wooldridge's scouting agent functionality into Baumann's

agent system. Wooldridge discloses that such functionality is useful for a scouting agent to

be sent ahead of time to collect necessary information for other agents or users.

16>   As to claims 41, 42 and 45, they are rejected for at least the same reasons set forth for

claim 40.

17>   Claims 2-4, 6 and 31-33 are rejected under 35 U.S.C § 103(a) as being unpatentable over

Baumann, in view of Aridor et al, "Agent Design Patterns: Elements of Agent Application

Design" ["Aridor"].

18>   As to claims 2-4, 6, 31 and 32, Baumann discloses coordinating program comprising

code for transmitting said coordinating program and said plurality of heterogeneous

programs to said at least one second computer [pgs. 1-3 : Section 2 "Agent-based systems-Our

Agent Model"]. Baumann does not expressly disclose transmitting said programs in response

to a predetermined condition, determine the at least one second computer to move said code,

or storing a sequence defining an order of preference for at least two second computers.

19>   In the same field of invention, Aridor is directed towards a system of mobile agents.

Hohl discloses code for transmitting programs in response to a predetermined condition [3.1

Traveling Patterns], determining the at least one second computer to move said code [3.1

Traveling Patterns], and storing a sequence defining an order of preference for at least two

second computers [3.1 Traveling Patterns]. It would have been obvious to one of ordinary

skill in the art to incorporate Aridor's teachings of an itinerary into Baumann's agent system.

One would have been motivated to provide such a combination as the itinerary feature would

enable sending Baumann's agents to multiple destinations in a list and select an appropriate

destination.

20>   As to claim 33, Baumann does not expressly disclose determination to which one of a

plurality of other computers the coordinating program will be transmitted.

21>   Aridor discloses feature of determination to which one of a plurality of other

computers the coordinating program will be transmitted [Section 3.1 : Traveling Patterns]. It

would have been obvious to one of ordinary skill in the art to incorporate Aridor's itinerary

feature into Baumann's agent system in order to easily determine which destination

computers an agent is transmitted.

22>   Claims 5, 7, 8, 14, 16-20 and 34 are rejected under 35 U.S.C § 103(a) as being

unpatentable over Baumann, in view of Hofmann et al, U.S Patent No. 6.263.983.

23>   As to claims 5, 7 and 34 Baumann does not expressly disclose monitoring the status of

a second computer or controlling the heterogeneous programs in dependence upon said

monitoring. As to claim 8, Baumann does disclose controlling a number of heterogeneous

programs [pgs. 5-6, Section 4.1 "Group Initiator"] but does not base control on said

monitoring.

24>   Hofmann discloses the use of discover agents that have the ability to collect

information (monitor) the hardware configuration of a computer [column 7 «lines 38-51»]

and controlling programs in dependence upon said monitoring [column 4 «lines 13-38» :

discover rules]. It would have been obvious to one of ordinary skill in the art to modify

Baumann to include Hofmann's discover functionality. One would have been particularly

motivated to enable data and information collection by mobile agents as taught by Hofmann

to provide useful information to other agents [see Hofmann, column 1 «lines 48-53»].

25>   As to claim 14, it is rejected for at least the same reasons discussed in claims 5-8.

26>   As to claims 16-20, Hofmann discloses monitoring a computer's hardware, including

processor and memory information [column 7 «lines 4-17»]. It would have been obvious that

Hofmann's hardware would include other well known hardware devices as storage capacity,

input devices and battery life.

27>   Claims 9, 10, 13, 33 and 35 are rejected under 35 U.S.C § 103(a) as being unpatentable

over Baumann, in view of Walsh, U.S Patent No. 6.233.601.

28>   As to claims 9 and 10, Baumann does disclose at least one second computer comprises

at least two second computers [pg. 3, Fig. 1 : location B and location C] and at least one

heterogeneous program of said plurality of heterogeneous programs comprise code for

transmitting said at least one heterogeneous program to another of said at least one second

computers [pg. 2, Section 2 "Agent-Based Systems" | pgs. 5-10]. Baumann does not expressly

disclose a move instruction.

29>   In the same field of invention, Walsh is directed towards a mobile agent system.

Walsh discloses moving agents in response to a move instruction from a coordinating

program, and transmitting a move instruction in response to a monitoring status [Figures 1, 2

| column 3 «lines 55-65» | column 4 «line 47» to column 5 «line 4»]. It would have been

obvious to one of ordinary skill in the art to incorporate Walsh's move instruction feature

into Baumann. Baumann already discloses moving agents from computers and Walsh's

teachings would enable the moving functionality to be based on instructions generated by a

coordinating program.

30>   As to claims 13 and 35, Baumann does not disclose a support program.

31>   Walsh discloses determining whether a computer will support a coordinating program

and said plurality of heterogeneous computer programs and, where a second computer will

not support said coordinating program and said plurality of heterogeneous computer

programs to transmit and cause to execute thereon, a support program to adapt and the

second computer to support said coordinating program and said plurality of heterogeneous

computer programs [column 4 «lines 20-35» : downloading of additional code necessary to

operate on the destination computer]. It would have been obvious to one of ordinary skill in

the art to implement Walsh's downloading of code into Baumann's system. Baumann

already contemplates sending code to new locations [pg. 2, ¶3]. Walsh's teachings would

improve Baumann by enabling a more flexible system whereby agents can download

additional code.

32>   Claim 15 is rejected under 35 U.S.C § 103(a) as being unpatentable over Baumann and

Hofmann, in further view of Walsh.

33>   As to claim 15, Baumann and Hofmann disclose programs for monitoring a second

computer but do not disclose signaling computer selection data based on said monitoring.

34>   Walsh discloses signaling computer selection data to a coordinating program [Figure

6]. It would have been obvious to one of ordinary skill in the art to combine Baumann,

Hofmann and Walsh's teachings to provide a combination whereby an agent's itinerary is

based on monitoring information. One would have been motivated to provide such a

combination as to provide a more informed means of constructing an agent's itinerary.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Frew et al, U.S Patent No. 6.009.456;

White et al, U.S Patent No. 6.016.393;

Devarakonda et al, U.S Patent No. 6.055.562;

Paciorek, U.S Patent No. 6.065.039;

Bigus et al, U.S Patent No. 6.192.354;

Chang et al, U.S Patent No. 6.226.666.

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

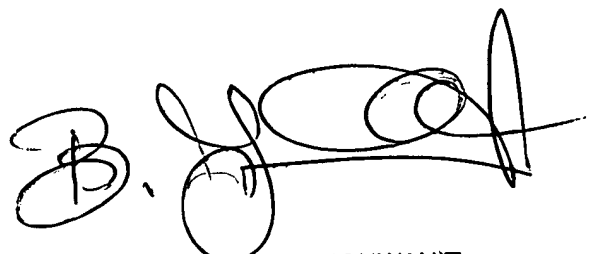extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942.

The examiner can normally be reached on Monday-Thursday [7:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information

for unpublished applications is available through Private PAIR only. For more information

about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on

access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-9199 (IN USA

OR CANADA) or 571-272-1000.

DC

BUNJOB JAROENCHONWANIT
SUPERVISORY PATENT EXAMINER